

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/188,815	BARADARAN, HAMID R.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Brenda Pham	2664	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/09/1998.
2. ☒ The allowed claim(s) is/are 1,4-7,9-13,15-34,36-46 and 48-51.
3. ☒ The drawings filed on 09 November 1998 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>4/15/99</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                              | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

### EXAMINER'S AMENDEMENT

I. An examiner's amendment to the record appears below.

Claims 2, 3 canceled.

Claim 1 is amended as follow:

1. A communications access device providing subscriber access to a high speed communication line, comprising:

a backplane connected to said high speed communications line;

plural line cards connecting said backplane to at least one subscriber line;

wherein at least one of said plural line cards comprises at least one programmable resistor termination, and

means for receiving commands for programming said at least one resistor termination;

a control unit configured to transmit said commands across said backplane to at least one of said line cards;

wherein said control unit is further configured to send messages to the line cards having programmable resistor terminations, said messages containing programming steps to at least one of activate and deactivate the programmable resistor terminations that are stored in a memory on said line cards and executed upon receipt of a command to initiate any one of said programming steps.

In claim 4, "claim 3" is changed to --claim 1--.

In claim 5, "claim 3" is changed to --claim 1--.

In claim 6, "claim 2" is changed to --claim 1--.

Claim 8 is canceled.

Claim 7 is amended as follow:

7. A method of operating an electronic device, comprising the steps of:

identifying a last programmable line card installed on a bus of said electronic device; and

configuring the last programmable line card to terminate said bus by activating programmable termination of said last programmable line card connected to said bus;

wherein said step of identifying comprises the steps of:

sending an interrogatory message from a control device to a last line card slot connected to said bus to determining, based on one of a return message from a line card installed in the last line card slot and lack of a return message, whether said last line card slot contains a line card having programmable line card terminations; and

repeating said steps of sending and determining on a next line card slot until a line card closest to said last line card slot and having programmable line card terminations is identified.

In claim 9, "claim 8" is changed to --claim 7--.

Claim 12 is amended as follow:

12. A line card device, comprising:

at least one programmable impedancé termination; and

a receiving device configured to receive commands for programming each impedance termination;

wherein said receiving device comprises,

a connection device configured to connected said line card device to a backplane, and

a command reading device configured to read commands sent to said line card device across said backplane.

In claim 13, "claim 6" is changed to --claim 12--.

Claim 14 is canceled.

In claim 17, "claim 6" is changed to --claim 12--.

In claim 18, "claim 11" is changed to --claim 12--.

In claim 19, "claim 11" is changed to --claim 12--.

In claim 20, "claim 6" is changed to --claim 12--.

In claim 27, "claim 6" is changed to--claim 12--.

In claim 28, "claim 6" is changed to--claim 12--.

In claim 29, "claim 6" is changed to--claim 12--.

Claim 35 is canceled.

Claim 34 is amended as follow:

34. A method of operating a line card having at least one programmable impedance termination for traces on said line card, comprising the steps of:

receiving at least one command from a command unit indicating a state of the impedance terminations; and

executing the received commands by performing steps necessary to place the impedance terminations in the indicated state;

wherein said step of executing comprises the step of:

identifying impedance terminations corresponding to a command received;  
determining a programmed state for the corresponding impedance terminations  
according to the command received; and  
directing the corresponding impedance terminations to the programmed state.

Claim 47 is canceled.

Claim 46 is amended as follow:

46. A method for executing commands received by a line unit adapted to be connected to a backplane, comprising the steps of:

said line unit receiving commands calling for said line unit to one of terminate or not terminate a subject trace on a backplane bus;

said line unit storing an indication of whether the most recent of said commands called for said line unit to terminate or to not terminate said subject trace;

said line unit receiving queries calling for said line unit to indicate the state of its termination of said subject trace; and

said line unit responding to said queries with the indication most recently stored in said step of storing an indication;

the step of said line unit terminating said subject trace in response to said line unit receiving a command calling for said line unit to terminate said subject trace.

Art Unit: 2664

II. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

III. Authorization for this examiner's amendment was given in a telephone interview with Mr. Bobby Slaton, Reg. 43130 on April 28, 2005.

### **REASONS FOR ALLOWANCE**

IV. Claims 1, 4-7, 9-13, 15-34, 36-46, 48-51 allowed.

V. The following is an examiner's statement of reasons for allowance: the prior art made of record does not teach or fairly suggest in combination wherein said control unit is further configured to send messages to the line cards having programmable resistor terminations, said messages containing programming steps to at least one of activate and deactivate the programmable resistor terminations that are stored in a memory on said line cards and executed upon receipt of a command to initiate any one of said programming steps.

The prior art further fails to teach wherein said step of identifying comprises the steps of: sending an interrogatory message from a control device to a last line card slot connected to said bus to determine a status of the last line card slot; determining, based on one of a return message from a line card installed in the last line card slot and lack of a return message, whether said last line card slot contains a line card having programmable line card terminations; and repeating said steps of sending and

Art Unit: 2664

determining on a next line card slot until a line card closest to said last line card slot and having programmable line card termination is identified.

The prior art further fails to teach or fairly suggest in combination said receiving device comprises, a connection device configured to connect said line card device to a backplane, and a command reading device configured to read commands sent to said line card device across said backplane.

The prior art further fails to teach in combination wherein said step of executing comprises the steps of: identifying impedance termination corresponding to a command received; determining a programmed state for the corresponding impedance terminations according to the command received; and directed the corresponding impedance terminations to the programmed state.

The prior art further fails to teach in combination the step of said line unit terminating said subject trace in response to said line unit receiving a command calling for said line unit to terminate said subject trace.

VI. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 2664

### Conclusion

VII. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Poole (US 5,583,867) discloses a backplane wiring for hub in packet data communications system with a termination resistors that are usually required on a horizontal bus. These termination resistors must be physically mounted on the backplane. The termination resistors often consume power, complicate backplane implementation and reduce reliability.

DeFino et al (US 4,481,574) discloses a programmable interface between remote terminals and a computer.

McMillian et al (US 6,229,814) discloses a digital switch-Resistant multicircuit line card providing direct connection to remote terminal.

### Conclusion

VIII. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brenda Pham whose telephone number is (571) 272-3135. The examiner can normally be reached on Monday-Friday from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin, can be reached on (571) 272-3134.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

April 29, 2005  
Brenda Pham



WELLINGTON CHIN  
SUPERVISORY PATENT EXAMINER